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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, CHANH DUY

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/631,698	Applicant(s) ITOH ET AL.	
	Examiner Chanh Nguyen	Art Unit 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-12, 15-20, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 7-9, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of invention Group I, claims 1-20 and 21-25 in the reply filed on is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listed of related cases filed on November 03, 2000 and the references cited on the Information Disclosure Statement field on April 14, July 25, 2005 have considered by examiner; see attached PTOs-1449.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6, 19 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (U.S. Patent No. 5,682,181) in view of Sonehara et al (U.S. Patent No. 5,075,798) .

As to claim 1, Nguyen discloses a projection display apparatus (10) that projects images onto a screen (21) in response to given image data including an embellishment effect memory (42) for storing embellishment effect data representing an embellishment effect image (i.e. overlay image such menu window 60) that can be used to embellish an arbitrary image. Nguyen teaches an image embellishment section (11) that generates embellished image data (50A and 60) by overlaying an

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original image (50A) represented by the given image data (i.e., primary video image 50A) and the embellishment effect image (i.e. overlay image 60).

Nguyen teaches an optical system (overhead projector 20) for projecting onto the screen the embellished image (50A and 60) obtained by the liquid crystal display unit (12) (see column 4, lines 38-40 and column 5, lines 1-46). Nguyen teaches a liquid crystal display unit (12) that is driven in response to the embellished image data pixel by pixel, but does not mention the liquid crystal display unit being a light modulation unit. However, using light modulation in the liquid crystal display is well-known in the art as taught by Sonehara. For example, in same field of endeavor (projector), Sonehara teaches that "the electro-optical material such as liquid crystal PLZT and the like can be used in the light valve (see column 3, lines 17-20) as well as "light valve 4 is positioned so that the images are focused through projection lens 6 onto screen 9 and develops the picture images corresponding to each colored light" (see column 5, lines 26-32). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used light modulation unit (or light valve LCD) as taught by Sonehara because the light valve improves the contrast of the display pictures (see column 3, lines 15-16 of Sonehara).

As to claim 19, this claim differs from claim 1 only in that claim 19 is method whereas claim 1 is apparatus. Thus, method claim 19 is analyzed as previously discussed with respect to apparatus claim 1 above.

As to claim 2, Nguyen clearly teaches the image embellishment section (11) including an image overlay section 30, 40, 42) that overlays the embellishment effect

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image (i.e. overlay image such menu window 60) at a specified location on the original image (50A) (see column 5, lines 27-41).

As to claim 3, Nguyen clearly teaches the embellishment effect memory (42) storing a plurality of embellishment effect data representing a plurality of embellishment effect images (menu 60 including a plurality of menu control button such as windows 62-65). Nguyen teaches the image overlay section (30, 40, 42) superimposing at least one selected embellishment image at each specified position (e.g., top portion of the image) on the original image (50A) ; see column 5, lines 30-42).

As to claims 4, Nguyen teaches the image overlay section (30, 40, 42) including an embellishment effect bitmap memory (42) for storing embellishment effect bitmap data obtained from the embellishment effect data (see column 4, lines 38-42). Nguyen teaches a synthesizer section (e.g., 40, 12, 20) that generates the embellished image data by synthesizing the given image data (50A) and the embellishment effect bitmap data (60) read from the embellishment effect bitmap memory (42). Even Nguyen and Sonehara does not mention a frame memory for storing the embellished image data, but it would have been obvious to one of ordinary skill in the art that LCD panels Nguyen and Sonehara would have a frame memory which is known in the art as a display memory so that the image can be accessed frame by frame. Thus combining Nguyen and Sonehara would meet the claimed limitation the frame memory having at least a memory area corresponding to all the pixels of the light modulation unit, the embellished image data read out from the frame memory being provided to the light modulation unit as recited in the claim.

As to claim 5, Nguyen teaches the image overlay section (11) including an embellishment effect bitmap memory (42) for storing embellishment effect bitmap data obtained from the embellishment effect data. Nguyen teaches a frame memory (44) for storing the given image data (50A) (see column 4, lines 38-43), the frame memory (44) having at least a memory area corresponding to all the pixels of the liquid crystal display panel (12) (see column 4, lines 43-47). Nguyen teaches synthesizer section (40, 12, 20) that generates the embellished image data (50A and 60) by synthesizing image data read from the frame memory and the embellishment effect bitmap data read from the embellishment effect bitmap memory, the embellished image data synthesized by the synthesizer section being provided to the liquid crystal display panel unit (12). Thus, combining Nguyen and light modulation unit as taught by Sonehara would meet the claimed limitation for the same reason as mentioned in claim 1.

As to claim 6, Nguyen clearly teaches the synthesizer section (40, 12, 20) comprises a data selector (multiplexor 40) that selects either one of the image data and the embellishment effect bitmap data, pixel by pixel, to produce the embellished image data (see column 4, lines 44-54).

As to claim 24, Nguyen clearly teaches wherein the image overlay section (11) overlaying the embellishment image (e.g., draw mode or color mode for drawing or coloring the primary image 50b) in a specific area on the original image (primary image e.g., 50b), the specific area being determined by first and second coordinates, the

specific area being substantially equal in size to the embellishment image; see column 6, lines 25-49 and column 7, lines 1-14.

As to claim 25, Nguyen teaches the image overlay section setting the first and second coordinates based on outputs from a pointing device (24); see column 6, lines 25-49 and column 7, lines 1-14.

8. Claims 10-12, 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Engstrong et al (U.S. Patent No. 5,850,232).

As to claim 20, Nguyen discloses method of displaying an image obtained by embellishment of original image data given to a projection display apparatus, comprising the steps of:

storing given original image data (primary video image 50A stored in memory 44) (see column 4, lines 38-43);

storing a first embellishment image data representing a first embellishment image (e.g., menu 60 stored in overlay map memory unit 42) having a shape and size that can be set (see column 4, lines 38-43) ;

generating embellished image data representing embellished image (50A and 60) by overlaying an original image represented by the original image data (50A) with the first embellishment image (menu 60) (see column 5, lines 39-41). Nguyen does not mention a step of storing a second embellishment image data representing a second embellishment image having a size that can be altered while a shape is maintained similar. In same field of endeavor (overlay), Engstrong teaches using an overlay front buffer and back buffer for storing overlay window images. Engstrong also

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teaches that the window changes the size and position of the overlay (see column 15, lines 38-43 and lines 59-63). Thus, the window size is changed, but its shape is maintained the same (i.e. maintaining the rectangular shape as conventional window shape). This read on the step of storing second embellishment image data as recited in the claim. Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the second embellishment image data as taught by Engstrong to the overlapping images of Nguyen so as to prevent tearing problem where the display controller attempts to display parts of an image the an application is trying to draw (see column 1, lines 52-55).

As to claim 18, this claim differs from claim 20 only in that claim 18 is apparatus whereas claim 20 is method. Thus, apparatus claim 18 is analyzed as previously discussed with respect to apparatus claim 20 above. The additional limitations an image display signal generator and an electro-optical device read on LCD panel 12 of Nguyen. It is known in the art all liquid crystal display panels having driver circuit as an image display signal generator.

As to claim 10, this claim differs from claim 18 only in that the limitation projection is additionally recited. Nguyen clearly teaches a projector (20).

As to claim 11, Nguyen clearly teaches he first embellishment memory (42) having a memory space to hold $1/n$ (where n is an integer of at least 1) lines (i.e. a portion of 1024 by 768 lines or 640 by 480 lines) and $1/n$ pixels of the frame memory and stores the first embellishment image data in an area corresponding to the position at which the first embellishment images are to be superimposed (see Figure 6 and

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column 4, lines 44-54). Engstrong the second embellishment memory (buffer) storing the second embellishment image data (an image in one of the windows) and stores at least coordinate data indicating the overlay position thereof on the original image.

Thus, combining Nguyen and Engstrong would meet the claimed limitation.

As to claim 12, Nguyen clearly teaches n being an integer of at least 2 (i.e. a menu displayed more than half screen) as shown in Figures 4-6.

As to claim 15, Nguyen combining with Engstrong meets the claimed limitation a storage memory for storing a plurality of embellishment image data as the second embellishment image data; wherein the second embellishment memory stores at least one embellishment image data selected from the storage memory as recited in the claim.

As to claims 16-17, Nguyen clearly teaches the image embellishment section comprises a drawing section (i.e. draw mode) that draws the first embellishment image based on set drawing conditions; the drawing section drawing the first embellishment image in the first embellishment memory based on at least a shape and position of the first embellishment image set by a user using a drawing instruction image which is one of the second embellishment images selected for setting conditions for drawing the first embellishment image; see column 6, lines 1-68.

Allowable Subject Matter

9. Claims 7-9 and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nelson et al (U.S. Patent No. 6,209,061) is cited to teach an overlay memory .


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (571) 272-7772. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CN

C. Nguyen
September 5, 2005


Chanh Nguyen
Primary Examiner
Art Unit 2675